THE OFFICE OF REGULATORY STAFF

DIRECT TESTIMONY & EXHIBITS

OF

MATTHEW P. SCHELLINGER, II

AUGUST 17, 2018

DOCKET NO. 2018-3-E

ANNUAL REVIEW OF BASE RATES FOR FUEL COSTS OF DUKE ENERGY CAROLINAS, LLC

DIRECT TESTIMONY AND EXHIBITS OF

MATTHEW P. SCHELLINGER II

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2018-3-E

IN RE: ANNUAL REVIEW OF BASE RATES FOR FUEL COSTS OF

DUKE ENERGY CAROLINAS, LLC

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Matthew P. Schellinger II. My business address is 1401 Main Street, Suite 900, Columbia, South Carolina, 29201. I am employed by the Office of Regulatory Staff ("ORS") in the Utility Rates and Services Division as a Regulatory Analyst.

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I received a Bachelor of Science Degree with a major in Accounting from the University of South Florida in 2012. I received a Master of Business Administration with a focus in Management and Strategy from Western Governors University in 2016. From 2007 to 2013, I was employed as Controller for an insurance agency. In that capacity, I performed general corporate accounting functions on a daily and monthly basis. In February 2013, I began my employment with ORS as an Auditor. In May 2016, I joined the Utility Rates and Services Division as a Regulatory Analyst. I have previously testified before the Public Service Commission of South Carolina ("Commission" or "PSC") on natural gas, water and wastewater matters.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to set forth the ORS's recommendations resulting from our examination and review of Duke Energy Carolinas, LLC's ("DEC" or "Company") fuel expenses and power plant operations used in the generation of electricity to meet the Company's South Carolina retail customer requirements during the review period. The review period includes the actual data for June 2017 through May 2018 ("Actual Period"), estimated data for June 2018 through September 2018 ("Estimated Period"), and forecasted data for October 2018 through September 2019 ("Forecasted Period").

Q. WHAT DID YOUR REVIEW OF THE COMPANY'S FUEL EXPENSES AND PLANT OPERATIONS INVOLVE?

A. ORS examined various fuel and performance related documents as part of our review. These documents addressed the Company's electric generation and power plant outage and maintenance activities. In preparation for this proceeding, ORS analyzed the Company's monthly fuel reports including power plant performance data, unit outages and generation statistics. ORS examined the Company's contracts for nuclear fuel, coal, natural gas, fuel oil, transportation, purchased power, and environmental reagents. ORS also evaluated the Company's policies and procedures for fuel procurement. All information was reviewed with reference to the Company's existing Adjustment for Fuel, Variable Environmental, Avoided Capacity, S.C. Code Ann. §58-27-865 (2015) (the "Fuel Clause Statute"), and the approved South Carolina Distributed Energy Resource Program ("DERP").

Q. WHAT ADDITIONAL STEPS WERE TAKEN IN ORS'S REVIEW OF THE COMPANY'S PROPOSAL IN THIS PROCEEDING?

A. ORS met with Company personnel from various departments to discuss and review fossil and nuclear fuel procurement, fuel transportation, environmental compliance costs and procedures, emission allowances, generation plant performance, distributed energy resources, forecasting, and general Company policies and procedures pertaining to fuel procurement. These meetings occurred at DEC's headquarters in Charlotte, NC. In addition, ORS monitors the nuclear, coal, natural gas, transportation and renewable industries through industry and governmental publications. In March and April 2018, ORS attended meetings hosted by the Nuclear Regulatory Commission ("NRC") for the McGuire and Catawba nuclear generation stations in Huntersville, NC, and Rock Hill, SC, respectively. ORS staff also attended site visits at the Company's WS Lee Station (combined-cycle natural gas plant) and Bad Creek Hydroelectric Station (pumped storage) during the Actual Period.

Q. DID ORS EXAMINE THE COMPANY'S PLANT OPERATIONS FOR THE ACTUAL PERIOD?

A. Yes. ORS reviewed the performance of the Company's generation units to determine if the Company made reasonable efforts to maximize unit availability and minimize fuel costs. ORS also reviewed the operating statistics of the Company's power plants by unit. Exhibit MPS-1 shows, in percentages, the annual availability, capacity, and forced outage factors of the Company's major generation units during the Actual Period. This exhibit also includes the North American Electric Reliability Corporation ("NERC") national five-year (2012-2016) averages for availability, capacity, and forced outage factors for each type of generation plant.

Q. PLEASE EXPLAIN HOW THE OUTAGES ARE REPRESENTED ON EXHIBITS MPS-2 THROUGH MPS-4.

A. Exhibits MPS-2 and MPS-3 summarize outages lasting seven (7) or more days for major coal and natural gas units during the Actual Period, respectively. While not all coal and natural gas plant outages were included in these exhibits, ORS reviewed all outages and found them to be reasonable.

Exhibit MPS-4 summarizes all outages at the Company's nuclear plants during the Actual Period. As shown in Exhibit MPS-4, there were seven (7) separate outages involving DEC's nuclear units, including four (4) scheduled refueling outages, and three (3) forced outage during the Actual Period. The three (3) nuclear stations, which house a total of seven (7) units, achieved an overall average availability factor of 95.54% and an average capacity factor of 96.74% for the Actual Period, as shown in Exhibit MPS-1.

Q. WHAT WERE THE RESULTS OF YOUR ANALYSIS OF THE COMPANY'S POWER PLANT OPERATIONS FOR THE ACTUAL PERIOD?

A. ORS's review of the Company's operation of its generation facilities during the Actual Period revealed the Company made reasonable efforts to maximize unit availability and minimize fuel costs except in the case of the Oconee Unit 3 forced outage of 29.5 hours occurring between July 24, 2017 and July 25, 2017.

Q. PLEASE DESCRIBE THE CIRCUMSTANCES SURROUNDING THE OCONEE UNIT 3 FORCED OUTAGE IN JULY 2017.

A. As part of the typical review of plant outages, ORS requested the company provide numerous reports for all nuclear outages. Included in these was the Apparent Cause Evaluation Report ("ACE Report") regarding the outage at Oconee Unit 3. From the North

Carolina fuel hearing transcript, the North Carolina Public Staff Testimony of Dustin R. Metz made public certain portions of the ACE Report in Docket No. E-7, Sub 1163. The Company indicated that the outage resulted from a lack of training by the Company for transmission personnel working around single point vulnerabilities within the plant.

After review of the ACE Report, review of the North Carolina Public Staff Testimony of Dustin R. Metz (Docket No. E-7, Sub 1163), discussions with NC Public Staff, and discussions with Company personnel, ORS determined that the outage that occurred at Oconee Unit 3 on July 24 through July 25, 2017, resulted in replacement power costs that could have reasonably been avoided. ORS recommends an adjustment to reduce replacement power costs in the amount of $159,352. This adjustment is reflected in ORS witness Briseno's Adjustment D (Audit Exhibit ADB-5, page 2 of 2) and incorporated into Exhibit MPS-9.

Q. DID ORS REVIEW THE COMPANY'S GENERATION MIX DURING THE ACTUAL PERIOD?

A. Yes. Exhibit MPS-5 shows the generation mix for the Actual Period by percentage and generation type. As shown in this exhibit, the nuclear, coal, and natural gas plants contributed an average of 55.42%, 23.02% and 11.43%, respectively, of the Company's generation throughout the Actual Period. This equates to approximately 89.87% of the Company's generation for the Actual Period. The remainder of the generation was met through a mix of hydroelectric, renewables, purchased power, and Joint Dispatch Agreement ("JDA") purchases.

Q. DID ORS EXAMINE THE COMPANY'S FUEL COSTS ON A PLANT-BY-PLANT BASIS FOR THE ACTUAL PERIOD?

A. Yes. Exhibit MPS-6 shows the average fuel costs for the major generation plants on the Company's system for the Actual Period and the megawatt-hours ("MWh") produced by those plants. The chart shows the lowest average fuel cost of 0.639 cents/kilowatt-hour ("kWh") at McGuire Nuclear Station and the highest average fuel cost of 3.110 cents/kWh at Cliffside Steam Station. The Company utilizes economic dispatch which generally requires that the lower cost units be dispatched first.

Q. DID ORS REVIEW THE COMPANY'S ENVIRONMENTAL COMPLIANCE RELATED COSTS?

A. Yes. ORS reviewed the Company's environmental compliance related costs including allowances for nitrogen oxide ("NO_X") and sulfur dioxide ("SO_2") emissions, reagents (i.e., limestone, ammonia, urea, etc.), and chemicals used in the reduction of these emissions. The use of these chemicals and reagents reduces the Company's NO_X and SO_2 emissions, and the costs associated with the use of these substances are included in the Company's Adjustment for Fuel, Variable Environmental, Avoided Capacity, and Distributed Energy Resource Program Costs tariff as provided by the Fuel Clause Statute.

Q. HAS ORS REVIEWED THE ACCURACY OF THE COMPANY'S FORECAST?

A. Yes. As shown in Exhibit MPS-7, the Company's actual MWh sales were 1.16% lower than expected during the Actual Period. Exhibit MPS-8 shows that, on average, the actual fuel costs for the Actual Period were 15.85% higher than the projected monthly fuel costs.

Q. HAS ORS DETERMINED THE PRIMARY DRIVERS OF THE COMPANY'S REQUEST FOR A RATE CHANGE IN THIS PROCEEDING?

A. Yes. Exhibit MPS-9 shows ending period balances of base fuel, environmental, avoided capacity, and DERP avoided costs beginning in May 2009. As of May 2018, the Company, as adjusted by ORS and reflected on ORS witness Briseno's Exhibit ADB-5, has a base fuel cumulative under-recovery balance of $64,403,063, a variable environmental over-recovery balance of $1,461,868, avoided capacity over-recovery balance of $910,631, and DERP avoided costs over-recovery balance of $24,301.

As shown on ORS witness Briseno's Exhibit ADB-5, page 2 of 2, ORS projects the Company to have a base fuel cumulative under-recovery balance of $75,453,306, a variable environmental over-recovery balance of $1,425,966, an avoided capacity over-recovery balance of $396,890, and DERP avoided costs under-recovery balance of $19,458 by September 2018.

The Company's request for an increase is driven primarily by an under-collection of fuel costs from the Actual Period and an increase in projected fuel costs during the Forecast Period. In addition, there is an increase in DERP incremental costs included in the proposed DERP per account charges as compared to existing rates.

Q. WHAT CHANGES DOES THE COMPANY REQUEST TO ITS CURRENTLY APPROVED FACTORS?

A. DEC requests that the Commission approve an increase in its currently approved Base Fuel Component ("Base Fuel Component") for the Forecasted Period. Additionally, the Company has requested to update its Variable Environmental Component ("Environmental Component"), Avoided Capacity Cost Component ("Avoided Capacity Component"), and DERP Avoided Cost Component ("DERP Avoided Cost Component")

to reflect the Company's forecasted expenses and allocation of these expenses to each class of customer based on its contribution to the Company's 2017 firm summer peak.

Q. ARE THERE ANY ADDITIONAL FACTORS IN THIS DOCKET THAT WILL IMPACT CUSTOMERS' BILLS?

A. Yes. The Company has included proposed rates related to its DERP incremental expenses. ORS witness Johnson specifically addresses the Company's incremental expenses to be recovered as a fixed charge ("DERP Charge") on customers' bills and the Company's DERP avoided costs.

Q. PLEASE EXPLAIN EXHIBIT MPS-10.

A. Exhibit MPS-10 reflects ORS's calculation of the Base Fuel Component for the billing period of October 2018 through September 2019, with all ORS adjustments incorporated.

Q. PLEASE EXPLAIN EXHIBIT MPS-11.

A. Exhibit MPS-11 provides a comparison of the ORS proposed fuel factors to the Company's proposed Base Fuel Component, Environmental Component, Avoided Capacity Component, and DERP Avoided Cost Component.

Q. WHAT IMPACT WILL THE PROPOSED FUEL FACTORS AS ADJUSTED BY ORS HAVE ON A RESIDENTIAL CUSTOMER'S BILL?

A. If approved by the Commission, the ORS proposed rates, including the DERP Charge, would increase the average residential monthly bill using 1,000 kWh on Rate RS from $113.86 to approximately $118.59. This equates to an increase of $4.73 or 4.15%.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Office of Regulatory Staff

EXHIBIT MPS-1

Power Plant Performance Data

Duke Energy Carolinas, LLC

Docket No. 2018-3-E

			Actual Period Data		
Coal Plants	**Unit**	**MW Rating**	**Average Availability Factor (%)**	**Average Capacity Factor (%)**	**Average Forced Outage Factor (%)**
Belews Creek	1	1,110	71.66	39.23	2.15
Belews Creek	2	1,110	89.37	53.27	1.74
Cliffside	5	544	66.04	18.32	1.43
Cliffside	6	844	84.26	65.63	6.05
Marshall	1	370	70.26	27.20	0.74
Marshall	2	370	91.39	35.25	0.00
Marshall	3	658	89.70	62.27	3.44
Marshall	4	660	87.15	67.57	1.47
Coal Totals		**5,666**	81.53	48.75	2.41
NERC 5-year average (All Coal Plants)			***84.76***	***56.46***	***4.67***

CC Plants[1]	**Unit**	**MW Rating**	**Average Availability Factor (%)**	**Average Capacity Factor (%)**	**Average Forced Outage Factor (%)**
Buck	10	668	97.29	83.10	0.04
Dan River	7	662	94.67	81.51	0.08
WS Lee	10	753	59.90	38.91	6.21
CC Totals [2]		**2,083**	92.90	78.64	0.58
NERC 5-year average (CC Plants)			***87.68***	***53.04***	***2.62***

Nuclear Plants	**Unit**	**MW Rating**	**Average Availability Factor (%)**	**Average Capacity Factor (%)**	**Average Forced Outage Factor (%)**
Catawba	1	1,160	100.00	101.29	0.00
Catawba	2	1,150	92.28	92.19	0.00
McGuire	1	1,158	93.22	95.01	0.34
McGuire	2	1,158	100.00	102.13	0.00
Oconee	1	847	99.56	100.75	0.44
Oconee	2	848	91.83	92.57	0.00
Oconee	3	859	91.92	91.91	0.34
Nuclear Totals		**7,180**	95.54	96.74	0.16
NERC 5-year average (All Nuclear Plants)			***90.28***	***89.13***	***2.73***

[1] ***CC designates Combined-Cycle units.***

[2] ***CC Totals are weighted based on time as WS Lee was commissioned during the Actual Period.***

Office of Regulatory Staff

EXHIBIT MPS-2

Coal Unit Outages - 7 Days or Greater Duration

Duke Energy Carolinas, LLC

Docket No. 2018-3-E

Unit	Date Offline	Date Online	Hours	Outage Type	Explanation of Outage
Belews Creek 1	9/13/17	12/14/17	2,201.0	Planned	Unit taken offline for a planned Fall outage.
Belews Creek 2	10/18/17	11/13/17	636.6	Planned	Unit taken offline for a planned Fall outage.
Cliffside 5	9/14/17	10/27/17	1,046.0	Planned	Unit taken offline for a planned Fall outage.
Cliffside 5	3/17/18	5/20/18	1,512.0	Planned	Unit taken offline for a planned Spring outage.
Cliffside 5	5/20/18	5/23/18	85.7	Outage Extension	Scheduled outage extended due to emergent issues.
Cliffside 6	10/24/17	10/31/17	175.0	Forced	Generator field ground alarm during tornado.
Cliffside 6	10/31/17	11/21/17	498.0	Planned	Unit taken offline for a planned Fall outage.
Cliffside 6	11/21/17	11/23/17	59.0	Outage Extension	Scheduled outage extended due to emergent issues.
Cliffside 6	12/1/17	12/9/17	175.8	Forced	AVR cooling failure.
Marshall 1	9/16/17	12/19/17	2,266.6	Planned	Unit taken offline for a planned Fall outage.
Marshall 2	9/30/17	10/19/17	468.7	Planned	Unit taken offline for a planned Fall outage.
Marshall 3	3/2/18	3/17/18	359.8	Planned	Unit taken offline for a planned Spring outage.
Marshall 4	9/6/17	9/15/17	205.6	Maintenance	Unit taken offline for APH wash.
Marshall 4	11/25/17	12/4/17	228.2	Maintenance	Unit taken offline for stop valve cap gasket repairs.
Marshall 4	4/14/18	4/29/18	372.3	Planned	Unit taken offline for a planned Spring outage.

EXHIBIT MPS-3

Office of Regulatory Staff

Natural Gas Unit Outages - 7 Days or Greater Duration

Duke Energy Carolinas, LLC

Docket No. 2018-3-E

Unit	Date Offline	Date Online	Hours	Outage Type	Explanation of Outage
Buck	3/9/18	3/17/18	189.2	Planned	Unit taken offline for a planned Spring outage.
Dan River	10/5/17	10/15/17	224.5	Planned	Unit taken offline for a planned Fall outage.
Dan River	3/30/18	4/11/18	274.9	Planned	Unit taken offline for a planned Spring outage.
WS Lee	4/13/18	5/4/18	503.0	Planned	Commissioning outage.

Office of Regulatory Staff

Nuclear Unit Outages

Duke Energy Carolinas, LLC

Docket No. 2018-3-E

EXHIBIT MPS-4

Unit	Date Offline	Date Online	Hours	Outage Type	Explanation of Outage
Catawba 2	3/17/18	4/14/18	670.1	Planned	Unit taken offline for a scheduled refueling outage.
Catawba 2	4/14/18	4/14/18	6.2	Planned	Turbine overspeed trip test.
McGuire 1	9/23/17	10/16/17	564.0	Planned	Unit taken offline for a scheduled refueling outage.
McGuire 1	2/16/18	2/17/18	30.2	Forced	Reactor trip during solid state protection system testing.
Oconee 1	4/13/18	4/14/18	38.9	Forced	Repair electrical connector on control rod drive control system.
Oconee 2	10/27/17	11/26/17	715.6	Planned	Unit taken offline for a scheduled refueling outage.
Oconee 3	7/24/17	7/25/17	29.5	Forced	Relay testing resulting in a turbine/reactor trip.
Oconee 3	4/20/18	5/19/18	677.9	Planned	Unit taken offline for a scheduled refueling outage.

EXHIBIT MPS-5

Office of Regulatory Staff
Generation Mix (Percentage)
Duke Energy Carolinas, LLC
Docket No. 2018-3-E

	2017							2018					
	June	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Average**
Nuclear	55.38	52.37	57.90	58.08	61.22	58.33	58.08	50.45	61.22	56.24	58.33	54.13	**55.42**
Coal	27.38	29.53	19.21	20.33	11.96	15.93	20.33	30.96	11.96	21.78	15.93	22.63	**23.02**
Natural Gas	9.45	9.53	11.37	10.01	11.08	16.32	10.01	9.91	11.08	13.40	16.32	14.20	**11.43**
Hydroelectric	0.65	0.06	0.74	-0.19	3.23	2.78	-0.19	0.92	3.23	1.89	2.78	3.23	**1.20**
Solar	0.16	0.14	0.15	0.09	0.10	0.17	0.09	0.09	0.10	0.13	0.17	0.14	**0.13**
Wind	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
Biomass	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
Purchased Power	3.64	4.04	4.07	4.91	4.99	3.27	4.91	4.26	4.99	3.82	3.27	3.40	**4.03**
JDA Purchases	3.34	4.31	6.56	6.77	7.41	3.19	6.77	3.42	7.41	2.73	3.19	2.25	**4.76**

Numbers may not equal 100% due to rounding.

Office of Regulatory Staff

EXHIBIT MPS-6

Generation Statistics for Major Plants

Duke Energy Carolinas, LLC

Docket No. 2018-3-E

Plant	Fuel Type	Average Fuel Cost (¢/kWh) [1]	Generation (MWh)
McGuire	Nuclear	0.639	19,998,014
Oconee	Nuclear	0.652	21,267,673
Catawba	Nuclear	0.666	19,579,894
WS Lee CC	Natural Gas	2.719	516,859
Marshall	Coal	2.899	9,575,269
Buck CC	Natural Gas	2.907	5,156,450
Belews Creek	Coal	2.951	8,994,451
Dan River CC	Natural Gas	2.995	5,076,230
Cliffside	Coal	3.110	5,737,996

[1] ***Includes Base Fuel and Environmental Costs.***

EXHIBIT MPS-7

Office of Regulatory Staff

Comparison of South Carolina Estimated to Actual Energy Sales

Duke Energy Carolinas, LLC

Docket No. 2018-3-E

		2017							2018					
		June	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Period Total**
[1]	**Actual Sales (MWh)**	1,844,466	2,008,555	2,049,944	1,912,103	1,670,777	1,610,771	1,696,098	2,011,739	1,799,536	1,532,198	1,593,259	1,649,722	21,379,168
[2]	**Estimated Sales (MWh)**	1,836,874	1,983,220	2,074,220	1,957,876	1,643,778	1,614,884	1,741,451	1,892,915	1,865,385	1,718,125	1,674,255	1,626,980	21,629,963
[3]	**Difference [1]-[2]**	7,592	25,335	-24,276	-45,773	26,999	-4,113	-45,353	118,824	-65,849	-185,927	-80,996	22,742	-250,795
[4]	**Percent Difference [3]/[2]**	0.41%	1.28%	-1.17%	-2.34%	1.64%	-0.25%	-2.60%	6.28%	-3.53%	-10.82%	-4.84%	1.40%	-1.16%

EXHIBIT MPS-8

Office of Regulatory Staff

Comparison of South Carolina Estimated to Actual Fuel Cost

Duke Energy Carolinas, LLC

Docket No. 2018-3-E

		2017							2018					
		June	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Period Average**
[1]	**Actual Experience (¢/kWh)**	1.9024	2.1340	1.9481	1.6525	1.7731	1.8588	1.9816	3.0136	1.4015	1.9267	1.4880	1.9564	1.9197
[2]	**Original Projection (¢/kWh)**	1.7549	1.8474	1.7366	1.5342	1.4890	1.6368	1.6502	1.8005	1.5498	1.6321	1.5806	1.6723	1.6570
[3]	**Amount in Base (¢/kWh)**	1.5877	1.5877	1.5877	1.5877	1.7270	1.7270	1.7270	1.7270	1.7270	1.7270	1.7270	1.7270	1.6806
[4]	**Variance from Actual [1-2]/[2]**	8.40%	15.51%	12.18%	7.71%	19.08%	13.56%	20.09%	67.38%	-9.57%	18.05%	-5.85%	16.99%	15.85%

Office of Regulatory Staff
History of Cumulative Recovery Accounts
Duke Energy Carolinas, LLC
Docket No. 2018-3-E

EXHIBIT MPS-9

Period Ending	Base Fuel (Over)/Under	Environmental (Over)/Under	Avoided Capacity (Over)/Under	DERP Avoided Costs (Over)/Under
May-09	$ (44,315,294)	$ (3,514,786)	N/A	N/A
May-10	$ (53,785,597)	$ (3,242,609)	N/A	N/A
May-11	$ 528,767	$ (3,595,468)	N/A	N/A
May-12	$ (41,792,888)	$ (7,198,018)	N/A	N/A
May-13	$ (25,476,878)	$ (6,084,377)	N/A	N/A
May-14	$ 35,958,217	$ (1,788,254)	N/A	N/A
May-15	$ 30,787,463	$ (1,634,322)	$ 1,048,969	N/A
May-16	$ (35,017,408)	$ (4,759,509)	$ 1,875,605	$ (263,642)
May-17	$ 7,670,353	$ (2,985,690)	$ 792,575	$ (235,096)
May-18	$ 64,403,063	$ (1,461,868)	$ (910,631)	$ (24,301)

EXHIBIT MPS-10

Office of Regulatory Staff
Calculation of Base Fuel Component
Duke Energy Carolinas, LLC
Docket No. 2018-3-E

Projected Fuel Expense: October 2018 through September 2019	
Cost of Fuel	$384,278,514
Projected S.C. Retail Sales (MWh)	21,676,037
Average Cost (¢/kWh)	1.7728
Revenue Difference To be Collected from October 2018 through September 2019	
(Over)/Under-Recovery at September 30, 2018 $	75,453,306
Projected S.C. Retail Sales (MWh)	21,676,037
Average Cost (¢/kWh)	0.3481
Base Fuel Cost per kWh: Projected Period	
Average Fuel Cost (¢/kWh)	1.7728
Revenue Difference (¢/kWh)	0.3481
Base Fuel Component (¢/kWh)	***2.1209***

EXHIBIT MPS-11

Office of Regulatory Staff
Proposed Fuel Factors
Duke Energy Carolinas, LLC
Docket No. 2018-3-E

	DEC Proposed Fuel Factors (¢/kWh)					ORS Proposed Fuel Factors (¢/kWh)				
Customer Class	**Base Fuel Component**	**Environmental Component**	**Avoided Capacity Component**	**DERP Avoided Cost Component**	**Total Fuel Factor**	**Base Fuel Component**	**Environmental Component**	**Avoided Capacity Component**	**DERP Avoided Cost Component**	**Total Fuel Factor**
Residential	2.1216	0.0166	0.1274	0.0006	2.2662	2.1209	0.0166	0.1274	0.0006	2.2655
General Service / Lighting	2.1216	0.0193	0.1158	0.0005	2.2572	2.1209	0.0193	0.1158	0.0005	2.2565
Industrial	2.1216	0.0168	0.0901	0.0004	2.2289	2.1209	0.0168	0.0901	0.0004	2.2282